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| 10/656,730      | 09/05/2003  | Naim Istephanous     | P-10524.00          | 4768             |

7590 06/15/2007  
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| EXAMINER |
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ISABELLA, DAVID J

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3738

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06/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/656,730

Applicant(s)

ISTEPHANOUS ET AL.

Examiner

DAVID J. ISABELLA

Art Unit

3738

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 3/21/2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- 1) ☐ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Request for Continued Examination***

Applicant's request for Continued Examination filed on 3/21/2007 has been entered. An amendment to the specification was filed concurrently therewith.

***Status of the Claims***

Claims 13-22 are currently pending for consideration. No amendments were made to the claims.

The amendment filed 3/21/2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

For example, U.S. Patent No. 6,478,842 (Gressel et al.) discloses "a process for preparing a molded article comprising..., admixing a feedstock comprising metal powder and binder;... molding the feedstock into an unsintered form;..., removing the binder, and..., sintering the unsintered article for a time and at a temperature sufficient to densify the molded article to at least about 95% of the theoretical density of the metal" (column 1, lines 39-48 of Gressel et al.).

Gressel et al discloses two embodiments defining a theoretical density of the metal. In column 4, the two values are given as 98.1% and 98.6%. Nowhere in the

Art Unit: 3738

club heads. The heads were treated to remove the binder by immersion in mineral spirits to remove about 25% of the binder, and then further removing binder by heating in air up to a temperature of about 220° C. for 99 hours. Thereafter, the heads were sintered at a temperature of 1430° C. (2600° F.) for 1 hour. The sintered heads exhibited a density of 8.91 g/cm<sup>3</sup>, or 98.1% of theoretical.

The resulting heads were finished by blasting with silica beads at high velocity. The finished heads were shafted, and found to provide excellent performance as irons.

#### EXAMPLE 2

The general procedure of Example 1 was repeated. 17-4 PH stainless steel and tungsten alloy powders were blended with 5.4% by weight of thermoplastic polymeric binder. The stainless steel was a gas-atomized 18  $\mu$ m SS powder. The tungsten alloy comprised tungsten and 2% each of iron, nickel and copper. The powders each had a particle size of 1-44  $\mu$ m, and the theoretical density of the blend was 10.76 g/cm<sup>3</sup>. The stainless steel and tungsten alloys were present in a ratio of 1:1. The alloy blend was injected into a mold using injection molding techniques with 94.6% by weight of the metal. The blend was molded into the shape of sole weights for golf club heads. The weights were treated to remove the binder by heating in air up to a temperature of about 220° C. for 66 hours. Thereafter, the weights were sintered at a temperature of 1430° C. (2600° F.) for 1 hour. The sintered weights exhibited a density of 10.61 g/cm<sup>3</sup>, or 98.5% of theoretical.

disclosure of Gressel, et al is there enablement of the minimal range of 95%.

Applicant's specification is silent to this minimal range as well. Accordingly, the added language is clearly not supported by the original disclosure.

Applicant is required to cancel the new matter in the reply to this Office Action.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 13 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

Art Unit: 3738

which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. While the reference to Gressel et al, (incorporated into applicant's specification on page 24, lines 23-26), applicant cannot pick and choose which features (essential elements) from the incorporated references as forming the basis of his invention, especially a minimum value that is not specifically set forth in the reference to Gressel et al. Applicant's own specification is completely silent as to any density much less a "theoretical density". No values or parameters were set forth in applicant's own specification to support the limitation of the claims as now amended. There is no support for the language of "sintering the composite structure to achieve at least about 95% of the theoretical density of the metal alloy".

Claims 13 and 17 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for the range of 98.1% and 98.6% does not reasonably provide enablement for the minimum range of 95%. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. Applicant's specification is silent as to the amount of binder and metal alloy is used. There is no disclosure as to the particle size of the particles nor to the initial theoretical density of the initial starting elements. Lacking specific disclosure is not enabled by the disclosure of Gressel et al.

***Claim Rejections - 35 USC § 103***

Art Unit: 3738

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weaver (6641776) in view of either of Tomonto (6264687) or Schwartz et al (5443496) and Gressel et al [6478842].

Weaver discloses a method for making a modulated stent comprising the steps of compounding a mixture of at least one metal alloy and at least one polymer binder, molding the mixture to form a composite structure having a strut member and a supporting member; removing the binder from the composite structure; sintering the composite structure.

Weaver describes the method referring principally to the embodiment disclosed in Patent No. 5972027, however, states that the invention is not limited to the preferred embodiments but may cover various modification and equivalent arrangements. Each of Schwartz et al and Tomonto teaches fabrication stent from individual segments which are then interconnected to form a unitary device. Advantages for these types of stents are known in the art including better flexibility and conformity for complex body passageways. To make a plurality of adjacent stent segments by the process of Weaver and connecting the adjacent segments together on a mandrel by a flexible fastening means to yield a unitary stent that has flexibility and conformity properties that

Art Unit: 3738

better compliment complex body passageways would have been obvious to one with ordinary skill in the art from the teachings of either of Tomonto or Schwartz et al.

Gressel et al teaches utilizing ratio between the binder and the metal and sintering at temperatures that yield a final product having at least 95% of the theoretical value of the metal alloy. If not inherent, to achieve a high volume of metal alloy in the end product for strength and flexibility would have been obvious to one with ordinary skill in the art from the teachings of Gressel et al.

Claims 18,19,21 and 22, see column 5, lines 1+.

Claim 20, see column 1, lines 35+ and column 4.

### ***Conclusion***

Applicant's amendment to the specification necessitated the new ground(s) of rejection (35 USC 112, first paragraph) presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID J. ISABELLA whose telephone number is 571-272-4749. The examiner can normally be reached on MONDAY-FRIDAY.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, CORRINE MCDERMOTT can be reached on 571-272-4754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DAVID J. ISABELLA  
Primary Examiner  
Art Unit 3738

5/27/2007  
DJI